

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) An implantable cardiac rhythm management device, comprising:
 - a ventricular sensing channel for sensing ventricular depolarizations and generating a ventricular sense when a depolarization exceeds a specified threshold;
 - a ventricular shock channel for delivering a shock pulse;
 - a controller for detecting ventricular fibrillation from the rate of ventricular senses in the ventricular sensing channel;
 - a thoracic impedance channel for detecting respiratory activity;
 - a diaphragmatic pacing channel for delivering diaphragmatic pacing pulses; and,
 - wherein the controller is programmed to cause delivery of a shock pulse when ventricular fibrillation is detected and delivery of a diaphragmatic pacing pulse when no respiratory activity is detected

wherein the controller is programmed to:

begin charging an output capacitor of the ventricular shock channel when ventricular fibrillation is detected;

monitor respiratory activity via the thoracic impedance channel while the output capacitor is charging;

deliver diaphragmatic pacing if respiratory arrest is detected and only if the output capacitor has not finished charging; and,

deliver a shock pulse after the output capacitor is charged.
2. (Original) The device of claim 1 wherein the diaphragmatic pacing channel is also used for delivering cardiac pacing pulses, a diaphragmatic pacing pulse being of higher energy than a cardiac pacing pulse.
3. (Original) The device of claim 2 wherein a diaphragmatic pacing pulse is on the order of 10 to 30 volts.

4. (Canceled)

5. (Original) The device of claim 1 wherein the controller is programmed to deliver a diaphragmatic pacing pulse when both respiratory arrest and ventricular fibrillation are detected only after one or more shock pulses are unsuccessful in terminating the ventricular fibrillation.

6. (Original) The device of claim 1 wherein the controller is programmed to deliver a diaphragmatic pacing pulse during a ventricular refractory period after a ventricular sense if respiratory arrest is detected while no ventricular fibrillation is present.

7. (Currently Amended) The device of claim 1 ~~wherein the controller is programmed to: —begin charging an output capacitor of the ventricular shock channel when ventricular fibrillation is detected and to deliver a diaphragmatic pacing pulse while the output capacitor is charging if respiratory arrest is also detected; and,~~

wherein the controller is further programmed to monitor for respiratory activity after successful termination of the ventricular fibrillation by the shock pulse and deliver a diaphragmatic pacing pulse during a ventricular refractory period after a ventricular sense if respiratory arrest is detected.

8. (Currently Amended) A cardiac rhythm management device, comprising:
means for monitoring ventricular activity in order to detect ventricular fibrillation;
means for monitoring respiratory activity by measuring thoracic impedance;
means for delivering shock therapy upon detection of ventricular fibrillation; ~~and,~~
means for charging an output capacitor for delivering the shock therapy when ventricular fibrillation is detected;

means for monitoring respiratory activity via measurement of thoracic impedance while the output capacitor is charging;

means for delivering diaphragmatic pacing upon detection of respiratory arrest only if the output capacitor has not finished charging; and,

means for delivering a shock pulse after the output capacitor is charged.

9. (Currently Amended) The device of claim 8 further comprising means for ~~delivering diaphragmatic pacing during ventricular fibrillation while the shock therapy~~ delivering means ~~prepares to deliver a shock pulse~~ means for monitoring respiratory activity after successful termination of the ventricular fibrillation by the shock pulse and deliver a diaphragmatic pacing pulse during a ventricular refractory period after a ventricular sense if respiratory arrest is detected.

10. (Currently Amended) The device of claim 8 further comprising means for delivering ~~diaphragmatic pacing during a ventricular refractory period if ventricular fibrillation is not present~~ diaphragmatic pacing when both respiratory arrest and ventricular fibrillation are detected only after one or more shock pulses are unsuccessful in terminating the ventricular fibrillation.

11. (Currently Amended) A method for treating cardiac arrest by an implantable cardiac device, comprising:

monitoring a ventricular sensing channel in order to detect ventricular fibrillation;

begin charging an output capacitor of the ventricular shock channel when ventricular fibrillation is detected;

monitoring a thoracic impedance channel in order to detect respiratory arrest while the output capacitor is charging;

delivering shock therapy through a ventricular shock channel upon detection of ventricular fibrillation; and,

delivering diaphragmatic pacing upon detection of respiratory arrest only if the output capacitor is not finished charging; and,

delivering shock therapy through a ventricular shock channel after the output capacitor has charged.

12. (Original) The method of claim 11 wherein diaphragmatic pacing is delivered as pacing pulses to the phrenic nerve.

13. (Original) The method of claim 12 where the pacing pulses are on the order of 10 to 30 volts.

14. (Canceled)

15. (Currently Amended) The method of claim 11 further comprising delivering [[a]] diaphragmatic pacing when both respiratory arrest and ventricular fibrillation are detected only after one or more attempts with shock therapy are unsuccessful in terminating the ventricular fibrillation.

16. (Currently Amended) The method of claim 12 further comprising delivering a ~~diaphragmatic pacing pulse during a ventricular refractory period after a ventricular sense if respiratory arrest is detected while no ventricular fibrillation is present~~ diaphragmatic pacing through a cardiac pacing channel.

17. (Currently Amended) The method of claim 11 further comprising:
~~beginning to charge an output capacitor of the ventricular shock channel when ventricular fibrillation is detected and to deliver a diaphragmatic pacing pulse while the output capacitor is charging if respiratory arrest is also detected~~ monitoring respiratory activity after successful termination of ventricular fibrillation by the shock therapy; and,

delivering a diaphragmatic pacing pulse during a ventricular refractory period after a ventricular sense if respiratory arrest is detected after successful termination of ventricular fibrillation.